

WHAT IS CLAIMED IS:

1. In a computer-assisted language learning system, a method for analyzing grammar and building a learners' model using a student's level of proficiency, comprising the steps of:

maintaining a syntactic error table for the student, said error table including a column listing syntactic subtrees with associated frequency fields;

determining a proficiency level of a student's writing ability using a sentence input by the student;

matching the input sentence to a correct sentence in a database template;

obtaining a grammar tree of the matched correct sentence;

matching the input sentence to leaves of the grammar tree;

for each leaf of the grammar tree that is matched with words marked as errors, finding a minimum syntactic subtree of the leaf and associating the leaf with said subtree;

for all the subtrees found, combining leaves associated with a common subtree;

for each common subtree, searching the syntactic error table for the common subtree;

and

updating the table to reflect the common subtree.

2. The method as set forth in claim 1, said step of determining a proficiency level comprising the steps of:

determining a number of matched correct words in an input;

dividing the number of matched correct words by a length of said input to obtain an accuracy ratio;

dividing a weight of a matching algorithm by a weight of a matched path to obtain a weight ratio; and

multiplying the accuracy ratio and the weight ratio to obtain a proficiency level score.

3. The method as set forth in claim 1, wherein said matching algorithm is HCS matching algorithm.

4. The method as set forth in claim 1, said step of updating the table comprising the steps of:

incrementing, in response to finding the common subtree in the table, an associated frequency field by one; and

adding, in response to not finding the common subtree in the table, the common subtree as well as the associated leaves, to the table and assigning "1" to an associated frequency field.

5. The method as set forth in claim 2, further comprising the steps of:
sorting rows within said syntactic error table by said frequency fields to find most frequent syntactic errors; and

selecting a remediation set for the student based on the most frequent syntactic errors and the student's proficiency level score.